

REMARKS

The Office Action dated July 6, 2006 has been carefully considered. The present Amendment is intended to be a complete response thereto and to place the case in condition for allowance.

In the Office Action, the Examiner acknowledged the Applicants' election of claims 22-29 and withdrew claims 15-21 from consideration; rejected claims 23-29 under 35 USC § 112, second paragraph, as being indefinite; rejected claim 22 on the ground of nonstatutory obviousness-type double patenting as being obvious over claim 8 of U.S. Patent No. 6,726,863; rejected claims 22 and 25 under 35 USC § 103(a) as being obvious over applicants' admitted prior art (claim 22 preamble) and Prenger et al. (U.S. Patent No. 5,817,270); rejected claims 23 and 24 under 35 USC § 103(a) as being obvious over applicants' admitted prior art (claim 23 preamble) and Prenger et al. (U.S. Patent No. 5,942,171); rejected claims 26 and 29 under 35 USC § 103(a) as being obvious over applicants' admitted prior art (claim 26 preamble) and Prenger et al. ('171); and rejected claims 27-28 under 35 USC § 103(a) as being obvious over applicants' admitted prior art (claim 27 preamble) and Tsadares et al. (U.S. Patent No. 5,096,634).

The Examiner acknowledged receipt of the certified copies of the priority documents in Application Serial No. 09/940,626, but required amendment to the specification to reference the parent application. The Examiner also return an initialed copy of Form PTO/SB/08a indicating consideration of the Information Disclosure Statement.

As required by the Examiner, Applicants have amended the specification to reference prior Application No. 09/940,626, now U.S. Patent No. 6,726,863. Accordingly, Applicants respectfully submit that they have properly claimed priority to this application.

Claim 23 has been amended to remove the reference to polyolefin plastics material and to clarify the role of the grooves and/or ribs on the mandrel. Support for this amendment can be found, *inter alia*, in the specification in paragraphs [0219] – [0224]. Claims 24 and 25 has been amended to better correspond with U.S. patent practice. Claim 25 has also been amended to depend from claim 23 and to remove reference to alternative limitations of the regular angle intervals and the grooves. These alternative limitations are now presented in new claims 30 – 32. Claims 22 and 26 – 29 have been cancelled without prejudice to the subject matter therein.

Claims 23 – 24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for reciting the broad recitation "thermoplastic material" and the narrower statement "in particular polyolefin plastics material." The phrase "in particular polyolefin plastics material" has been deleted from claim 23. Accordingly, claim 23 is no longer indefinite, because the narrower phrase has been deleted. Reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph, indefiniteness rejection are respectfully requested.

Claims 23 – 24 also stand rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural relationships of apparatus elements. Specifically, the Examiner contends that the structural relationship between the grooves and/or ribs on the mandrel to the overall process is omitted. Claim 23 has been amended to add the phrase "said grooves and/or ribs causing a reduction in the wall thickness variation of the biaxially oriented tube," which describes the structural relationship of the grooves and/or ribs in the overall

process. Reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph, incompleteness rejection are respectfully requested.

Claim 25 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for reciting the broad recitation "regular angular intervals" and the narrower statement "preferably between 3° and 10°." The claims have been amended so that claim 25 no longer recites the statement "preferably between 3° and 10°." Accordingly, claim 25, as currently presented, no longer recites broad and narrow ranges. Reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph, indefiniteness rejection are respectfully requested.

Claim 25 stands rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural relationships of apparatus elements. Specifically, the Examiner contends that the structural relationship between the grooves and/or ribs on the mandrel to the overall process is omitted. Claim 25 has been amended to depend from claim 23, which, as discussed above, has been amended to describe the structural relationship of the grooves and/or ribs in the overall process. Reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph, incompleteness rejection are respectfully requested.

Claims 26 – 29 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for various reasons. As claims 26 – 29 have been cancelled, these indefiniteness rejections are now moot.

Claim 22 stands rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 8 of U.S. Patent No. 6,726,863. As claim 22 has been cancelled without prejudice to the subject matter therein, this double patenting rejection is now moot.

Claims 22 and 25 stand rejected under 35 U.S.C. § 103(a) as being obvious over applicant's admitted prior art (the claim preamble) and U.S. Patent No. 5,817,270 to Prenger et al. Claim 22 has been cancelled without prejudice. Claim 25 has been amended to depend on claim 23. Accordingly, the 35 U.S.C. § 103(a) obviousness rejection is now moot.

Claims 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being obvious over applicant's admitted prior art (the claim preamble) and U.S. Patent No. 5,942,171 to Prenger et al. (the '171 patent). Applicants respectfully traverse the 103(a) obviousness rejection.

The '171 patent is drawn to a method for manufacturing biaxially oriented tubing from a thermoplastic material using a mandrel. As shown in figure 4 of the '171 patent, the mandrel 50, has groove 57 on the outer surface of the expansion part 50b. As described in the '171 patent, the groove 57 is a circumferential groove that extends around the mandrel 50 (see column 10, lines 4 – 5). The liquid fed into this groove is forced between the outer surface of the mandrel 50 and the tube 2 to establish a film between the two. The liquid in this film flows upstream to the run-on part 50a of the mandrel 50 and then into the space 58. From the space 58, the liquid is relieved via the channel 60.

Paragraph [0218] of the present application describes what happens when a mandrel such as the one taught in the '171 patent is used for manufacturing biaxially oriented tubing. As described in the present application, when the preform passes over the expansion part local differences in wall thickness form "in the circumference of the preform."

As clearly recited in claim 23, the improvement of the present invention is the presence of "axially directed grooves and/or ribs." As described in paragraph [0221] of the present application, some of the soft plastic material of the preform engages with the axial grooves. This

engagement limits the freedom of movement of the plastic material in the circumferential direction. Because this freedom of movement in the circumferential direction is limited, variations in wall thickness cannot form in the preform. The fact that axial ribs would have the same effect as grooves is described in paragraph [0224] of the present application. Further, it should be noted that claim 23 does not require the presence of a liquid film. In fact, one can envisage applications wherein a liquid film would not be required, for example, when the frictional forces are not very high, such as when there is only a limited degree of circumferential expansion.

Because the groove described in the '171 patent is circumferential to the mandrel, it is unable to limit the freedom of movement of the plastic material in the circumferential direction. Accordingly, the present invention is not obvious over the claim preamble in view of the '171 patent. One of skill in the art could not possibly combine these two references to obtain the invention presently claimed, let alone be motivated to do so. Reconsideration and withdrawal of the 35 U.S.C. § 103(a) obviousness rejection are respectfully requested.

Claims 26 – 29 stand rejected under 35 U.S.C. § 103(a) as obvious over various combinations of references. As claims 26 – 29 have been cancelled, these obviousness rejections are now moot.

In the event there are any questions relating to this Response or the application in general, it would be appreciated if the Examiner would telephone the undersigned agent concerning such questions so that prosecution of this application may be expedited.

Please charge any shortage or credit any overpayment of fees to BLANK ROME LLP, Deposit Account No. 23-2185 (000023.00121). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not accompany this Amendment or is insufficient to render this Amendment timely, the Applicants hereby petition under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized above.

Respectfully submitted,

ARJAN DIRK VAN LENTHE et al.

By: Michael D. White
Michael D. White
Registration No. 32,795

BLANK ROME LLP
Watergate
600 New Hampshire Avenue, NW
Washington, DC 20037
Telephone: 202-772-5800
Facsimile: 202-572-8398